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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,525	04/16/2004	Charles D. Kim	EMP-138US	2153

24314 7590 12/07/2005

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EXAMINER	
COHEN, AMY R	

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/826,525	KIM, CHARLES D.
	Examiner	Art Unit
	Amy R. Cohen	2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-10,12,13 and 15-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *20* is/are allowed.

6)☒ Claim(s) *1-3,7-10,17 and 21* is/are rejected.

7)☒ Claim(s) *4,5,12,13,15,16,18,19,22 and 23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 9, 10, 13, 15, 20 are objected to because of the following informalities:

Claim 9, line 3 © should read (c).

Claims 10, 13, 15 refer to "intermediate layers" (and claim 10 also refers to "outer layers"), however, the claim language of claim 9 states that there is only one outer layer and one intermediate layer. Therefore, for purposes of prosecution, Examiner interprets the claim language to be referring to the single form, rather than the plural form of the intermediate layer (and in claim 10, also the outer layer).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 7, 8, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Wedemeyer (U. S. Patent No. 6,381,859).

Wedemeyer teaches an impact-absorbing level comprising: a body (1) including a level face (5) for measuring a surface, the body extending from a first end to a second end; at least one vial (2, 3) mounted in the body at a predetermined angular relationship to the level face; and a first end cap (10) fixed with respect to the first end (Fig. 1, the "first end" is read as the top of the level), the first end cap comprising an impact-resisting outer layer (12A) and an impact-compressing intermediate layer (12B), the intermediate layer fixed to the outer layer and having

a lower density than the outer layer, the intermediate layer positioned between the outer layer and the body (Fig. 4 and Col 3, lines 1-28); whereby the first end cap absorbs impacts to the outer layer to prevent damage to the body (Col 3, lines 1-28).

Wedemeyer teaches the level wherein the body defines a body profile at the first end, the outer layer defines an outer profile which matches the body profile, and the intermediate layer defines a rippled profile (11), the intermediate layer including portions matching the body profile spaced apart by portions smaller than the body profile (Figs. 1 and 4, Col 3, lines 1-28).

Wedemeyer teaches the level wherein each layer has at least one surface coplanar with the level face (Figs. 1 and 4).

Wedemeyer teaches the level wherein the first end cap is adhered to the body (Col 3, lines 1-28).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wedemeyer in view of Kelch et al. (U. S. Patent No. 5,356.705).

Wedemeyer discloses the level as described above in paragraph 3 and wherein the layers are composite materials of elastic materials and rubber (Col 3, lines 21-28).

Wedemeyer does not disclose the level specifically wherein the outer layer is acrylonitrile butadiene styrene and the intermediate layer is a thermoplastic rubber.

Kelch et al. discloses an impact-absorbing material wherein the outer layer is acrylonitrile butadiene styrene and the intermediate layer is a thermoplastic rubber (Col 5, lines 8-43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the level of Wedemeyer to specify that the outer layer is acrylonitrile butadiene styrene and the intermediate layer is a thermoplastic rubber, as taught by Kelch et al., since Wedemeyer discloses that the layers be of impact-proof, elastomeric materials, especially rubber and comparable synthetic materials (Wedemeyer, Col 3, lines 21-28) and since Kelch et al. discloses that acrylonitrile butadiene styrene and thermoplastic rubber are used in order to maintain impact resistance and weather resistance (Kelch et al, Col 5, lines 8-43).

6. Claims 1, 2, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Provi (U. S. Patent No. 3,921,306) in view of Wedemeyer.

Regarding claims 1 and 2: Provi discloses an impact-absorbing level (25) comprising: a body (28) including a level face (25a,b), the body extending from a first end to a second end (Fig. 1); at least one vial (35, 41) mounted in the body at a predetermined angular relationship to the level face (Fig. 1); a first end cap (29) fixed with respect to the first end, whereby the first end cap absorbs impacts to the outer layer to prevent damage to the body (Fig. 1, Col 2, lines 5-44); comprising a second end cap (29) fixed with respect to the second end (Fig. 1, Col 2, lines 5-44).

Provi does not disclose the level wherein the end caps each comprise an impact-resisting outer layer and an impact-compressing intermediate layer, the intermediate layer fixed to the outer layer and having a lower density than the outer layer, the intermediate layer positioned between the outer layer and the body.

Wedemeyer discloses a protective cap (10) wherein the protective cap comprises an impact-resisting outer layer (12A) and an impact-compressing intermediate layer (12B), the

intermediate layer fixed to the outer layer and having a lower density than the outer layer, the intermediate layer positioned between the outer layer and the body (Col 3, lines 21-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the end caps of Provi to have an outer layer and an intermediate layer, as taught by Wedemeyer, in order to further protect the body of the level by using an inner layer which is relatively less dense and an outer layer which is relatively more dense which will absorb the impact of a hit or drop of the level (Wedemeyer, Col 3, lines 21-28).

Regarding claims 9 and 10: Provi discloses a level (25) of the type having a body (28) extending from a first end to a second end (Fig. 1), a level face (25a,b) connected with respect to the body, the level face for measuring a surface, and a vial (35, 41) mounted with respect to the body at a predetermined angular relationship to the level face, a first end cap (29) mounted to the first end and a second end cap (29) mounted to the second end (Fig. 1).

Provi does not disclose the level wherein the end caps each have an outer layer and an intermediate layer contiguous thereto, the outer layer being positioned most distal from the respective end and the intermediate layer having a lower density than the outer layer, whereby impact to the outer layer results in compression of the intermediate layer and dissipation of the impact to prevent damage to the level.

Wedemeyer discloses a protective cap (10) wherein the protective cap has an outer layer (12A) and an intermediate layer (12B) contiguous thereto, the outer layer being positioned most distal from the respective end and the intermediate layer having a lower density than the outer layer (Fig. 4), whereby impact to the outer layer results in compression of the intermediate layer and dissipation of the impact to prevent damage to the level (Fig. 4, Col 3, lines 1-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the end caps of Provi to have an outer layer and an intermediate layer, as

taught by Wedemeyer, in order to further protect the body of the level by using an inner layer which is relatively soft and an outer layer which is relatively hard which will absorb the impact of a hit or drop of the level (Wedemeyer, Col 3, lines 21-28).

Regarding claim 17: Provi discloses a method of providing impact-absorption to a level, the method comprising: providing a level having a body defined by first and second ends; adhering an end cap to each end, whereby each end cap absorbs impact (Col 3, line 22-Col 3, line 33).

Provi does not disclose the method wherein the end cap is a dual-density end cap, each end cap having an intermediate layer for connection with respect to the respective end and an outer layer secured to the intermediate layer opposite from the end, the outer layer having an outer surface and greater density than the intermediate layer, whereby each end cap absorbs impacts to the respective outer surface by allowing the respective outer layer to resist the impact by moving toward the respective end during the impact through compression of the respective intermediate layer.

Wedemeyer discloses a method of providing impact-absorption to a level, the method comprising: providing a protective cap, the protective cap having an intermediate layer for connection with respect to the respective end and an outer layer secured to the intermediate layer opposite from the end, the outer layer having an outer surface and greater density than the intermediate layer, whereby the protective cap absorbs impacts to the respective outer surface by allowing the respective outer layer to resist the impact by moving toward the respective end during the impact through compression of the respective intermediate layer (Figs. 1 and 4 and Col 3, lines 1-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the end caps of Provi to have an outer layer and an intermediate layer, as

taught by Wedemeyer, in order to further protect the body of the level by using an inner layer which is relatively soft and an outer layer which is relatively hard which will absorb the impact of a hit or drop of the level (Wedemeyer, Col 3, lines 21-28).

Allowable Subject Matter

7. Claims 4, 5, 12, 13, 15, 16, 18-20, 22, 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claim 20 is allowed.

Reasons for Allowance

9. The following is a statement of reasons for the indication of allowable subject matter:

Claims 4, 5, 22, 23: The prior art of record does not disclose of suggest an impact-absorbing level comprising an impact-resisting inner layer having a higher density than the intermediate layer, the inner layer connecting the intermediate layer to the body in combination with the remaining limitations of the claims.

Claims 12. 13, 15, 16: The prior art of record does not disclose of suggest a level wherein each end cap further comprises an inner layer connecting the intermediate layer to the body and non-contiguous with the outer layer in combination with the remaining limitations of the claims.

Claims 18 and 19: The prior art of record does not disclose of suggest a method of providing impact-absorption to a level, wherein each end cap further includes an inner layer abutting the respective end, the intermediate layer being spaced apart from the body the by inner

layer and the outer layer being spaced apart from the inner layer by the intermediate layer in combination with the remaining limitations of the claims.

Claim 20: The prior art does not disclose or suggest an impact-absorbing level comprising a first end cap fixed with respect to the first end, the first end cap comprising an outer layer, an intermediate layer, a web layer and an inner layer, the outer, web and inner layers being comprised of a first material and the intermediate layer being comprised of a second material having lower density than the first material, the intermediate and web layers being positioned between the outer and inner layers and connecting the outer layer to the inner layer, and the inner layer connecting the intermediate and web layers to the body in combination with the remaining limitations of the claims.

Response to Arguments

10. Applicant's arguments with respect to claims 1-3, 7-10, 17, 21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy R. Cohen whose telephone number is (571) 272-2238. The examiner can normally be reached on 8 am - 5 pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARC
December 6, 2005

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